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States Government

Department of Energy

Rocky Flats Office

# Memorandum

JAN 12 1994

ER LG 00172

August 1993 Final Project-Specific Health and Safety Plan for Soil Vapor Extraction Subsurface Interim Measures/Interim Remedial Action East Trenches Area of Operable Unit No 2

Sue Stiger, Associate General Manager  
Environmental Restoration Management  
EG&G Rocky Flats, Inc

Please find attached DOE/RFO comments on the August 1993 Final Project-Specific Health and Safety Plan for Soil Vapor Extraction Subsurface Interim Measures/Interim Remedial Action East Trenches Area of Operable Unit No 2

We request that EG&G review the attached comments and modify the Health and Safety Plan to insure that those activities described in the Plan are conducted safely in accordance with OSHA and DOE Orders. We also request that EG&G provide DOE/RFO with a revised Health and Safety Plan and written responses to the comments listed as "comments" by February 6, 1994

We apologize for the tardiness of the attached comments and we recognize that the additional work resulting from these requests may not have been included in the current budget. However, in the interest of conducting our work in a safe manner, we believe that the Health and Safety Plan needs to be modified to reflect the attached comments

"We believe this request falls within current work package scope. If you find otherwise, please notify me and indicate the appropriate Change Control Board action."

Questions or concerns should be directed to Vern Witherill of my staff at extension 6585

CORRES CONTROL ☒ ☒  
PATS/T130G ☒ ☒  
ADMN RECORD/080 ☒ ☒

Reviewed for Addressee  
Corres Control RFP

1-13-94  
DATE BY

Ref Ltr #

Attachment

DOE ORDER # 5400 1

ADMIN RECORD

BZ-A-00104

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S Stuger  
ER LG 00172

2

cc w/Attachments

S Olinger, SH, RFO

G Noss, ESH, RFO

W Busby, EG&G

B Peterman, EG&G

cc w/o Attachments

R Schassburger, AMER, RFO

L Gunderson, ER, Aguirre

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January 6, 1993

To Martin McBride  
AMER/RFP

From Loren Gunderson CIH  
ER/RFP

Re Review of Final Project-Specific Health and Safety Plan for Soil Vapor Extraction  
Subsurface Interim Measures/Interim Remedial Action  
East Trenches Area, Operable Unit No 2 August , 1993

## COMMENTS

#1 P B1-1, Par 3, Sen 1  
P B 14-1

The statement that the previous H&S Plan " must be reviewed by all site personnel in conjunction with this PSHSP " places the responsibility (inadvertently, perhaps) for the "review" on the employees because no mechanism is established that ensures they receive, and understand the document Also, the scope of personnel covered by this Plan is vague in that it is not evident whether a subcontractor and employees are encompassed or not If they are, a compliance requirement may make this more explicit

The third-person wording of the Understanding and Compliance Statement does not guarantee the person signing it understands and will abide by the Plan, only that someone (who is not named and does not sign) has evaluated them as understanding the Plan and agreeing to abide The signature of the person signing the statement should make this evaluation on his/her own behalf i e , through a first-person statement.

#2 P B 2-1

Although it is technically acceptable to reference any previous Plan/Program/SOP for portions of this Plan to avoid unnecessary repetition, I believe a more straight-forward approach to identifying the organizational structure (to make explicit responsibilities and chain of command) would be more in keeping with the intent of 29 CFR 1910.120 (b) (2) Given the lengthy and (apparently) redundant inclusion of Appendices B2 (Respiratory Protection SOPs) and B4 (Medical Surveillance) there is no merit in excusing the absence of this text by reason of brevity

Because the previous H&S Plan is referenced, it also should be required to be in every location the Appendix B H&S Plan is located

Issues about responsibilities of subcontractors (and EG&G responsibilities to subcontractors) are not well addressed or referenced in this Plan, excepting the last sentence of Section B1

#3 P. B 4-3

Task 3 included ". collection, storage and transportation of potentially contaminated groundwater " The Section B-13 (Contingency Plans) does not address response actions to spills of potentially contaminated water as required in 29 CFR 1920.120 (b) (4) (J)

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#4 P B 5-8, Table B 5-2

The title of the table is inadvertently misleading, i.e., "Local Air Monitoring Trigger Levels for <sup>239</sup>Plutonium in Soils" may suggest that the exposure relates to an "environmental" type of monitoring in the local area of the work. As the footnote makes clear, the measurement is to be taken **in the breathing zone**. The distinction should be made in the title because an environmental sample may under report the breathing zone exposure by several orders of magnitude.

#5 P B5-4, Par 1

"Four inches of clearance for every 10 KV" is not correct and is insufficient guidance for exposure to a hazard with high probability of serious injury/death. 29 CFR 1926.952 (c) (2) and 1926.950 Table V-1 seem to apply and are significantly different than this rule, 29 CFR 1926.550 (a) (15) which applies to cranes resembles the proffered rule but the regulation also specifies "never less than 10 feet". High wind conditions can swing the "slack" in a utility line into contact with a mast, or swing a rig line into the power line. I would prefer as a first option that procedures for de-energizing the power line be evaluated.

Drill rig operation is recognized by workman's compensation carriers as an occupation with injuries and compensation costs much higher than most other work categories. I would encourage an appendix section (or at least a reference to) appropriate SOP(s) that identifies and controls the commonly recognized hazards of this task.

#6 P B 5-4, Section 5.2

The Plan does not mention what the concentrations of these contaminants are, (with the exception of Beryllium,) as should be done to ensure compliance with 29 CFR 1910.120 (c) (7).

#7 P B 5-4, Par 2

"Beryllium is the most *chemically* toxic metal that is *not a radio-isotope* at OU 2" may be (for what it is worth) more correct than the original sentence. The following sentence that equates 15  $\mu\text{g}/\text{kg}$  (sediment) with 0.2  $\text{pg}/\text{m}^3$  (air) doesn't correspond with any standard computation or method of evaluation that I know of. The following sentence muddles a logical argument with poor grammatical construction, but this is beside the point since a math error overstates the Beryllium exposure in a 15  $\text{mg}/\text{m}^3$  dust cloud by 1000 times (i.e., if the 15  $\mu\text{g}/\text{kg}$  figure is correct and someone please check on that). And finally, why use as an exposure limit the OSHA TWA when the NIOSH not-to-exceed recommendation is 0.0005  $\text{mg}/\text{m}^3$ ?

#8 P B5-5, Table B 5-1

This table should include exposure limit information regarding ceilings, STELs, NIOSH RELs and other "published exposure levels" as per 29 CFR 1910.120 (c) (7) (a).

#9 P B 5-6, Section 5.3

While paragraph 3 acknowledges that exposure to radiation can cause serious health effects, these health effects are not identified and should be, as per 29 CFR 1910.120 (c) (7).

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#10 P B 6-2, Table B 6-1  
P. B 5-8; Table B 5-2

The Action Limits for dust does not offer protection against airborne radionuclides from dusts generated during drilling activities. The radioisotope content of the sewage sludge disposed in the East Trenches reportedly ranged from 382 pCi/g to 3,590 pCi/g (Pilot Test Plan, SVE, OU2, Section 2.1.2). Using Table B 5-2 of the PHHSP, the DAC/10 criteria at these levels of exposure ranges from 0.5 mg/m<sup>3</sup> to 0.04 mg/m<sup>3</sup>, levels that suggest that the 0.4 mg/m<sup>3</sup> "action limit" will protect workers only when the disintegration activity is on the lowest range of the detected levels.

#11 P. B 9-1, Par 1

The example of an exclusion zone being a "4-foot radius around a rotating auger" is far from typical. All non-essential personnel should be kept at least one mast-length away from the drill hole and since sample preparation activities are performed in the exclusion zone, a work station for that purpose is typically located at least this distance removed, therefore, such an exclusion zone typically has a 30-foot radius. The condition of the auger being in rotation should not have any bearing on the size or establishment of the exclusion zone.

#12 P B 9-1, Par 5

Please specify the engineering controls you may employ. I would suggest misting the areas that may potentially generate dust. Although the Plan states that "The possibility of significant dust generation during SVE is considered to be low." I am concerned that vehicular traffic into this area (drill rig, support vehicles, water truck) could generate airborne dusts during the drier months.

#13 B 9-2, Par 5

This is inadvertently restrictive of who may enter the EZ, i.e., only authorized personnel named in the PHSHSP. Please consider a procedure that may permit personnel unnamed in this document but otherwise qualified who may need to enter the EZ.

#14 B 9-2, Par 6

Can it be determined with available information and the workplan where Radiological Work Permits are required or not required? What additional information will it take to determine this? Who is responsible for ensuring this information and evaluation is performed?

#15 P. B 11-1

Training requirements should also include Hazard Communication, site briefing and the daily safety briefing.

#16 P B 12-1

Medical Monitoring section should also require that all personnel required to wear respiratory protection shall be examined and approved by a Physician as capable of executing job duties while wearing the protection without impairment to health.

#17 P B 13-1, bulleted items

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This may be a small matter of semantics, but I would prefer that instead of saying "If a *chemical* gets in the eyes " that the words "chemically contaminated soil, dust or water" be substituted. The actual chemicals of concern are not discernable in themselves and the route exposure is generally as a contaminant of one of these media

#18 Appendix B-1

This appendix does not show up in the table of contents. Is there not a medical facility in Bldg 122 that is closer than Avista Hospital? A map of the route is preferable to a verbal description

#19 Pages HS-201 through HS-201-12 are missing